

WILSON (H. Aug.)

INDEX  
MEDICUS

[REPRINTED FROM THE AMERICAN LANCET, OCTOBER, 1892.]

*TUBERCULAR OSTITIS OF TARSUS—RHEUMATOIDAL ARTHRITIS OF TARSUS.\**

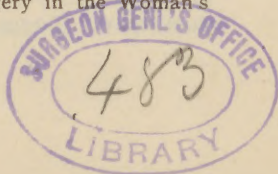
BY H. AUGUSTUS WILSON, M.D.†

1611 SPRU  
PHILADELPHIA.

GENTLEMEN: I wish to present to you this morning a group of three extremely interesting cases; in all of them the advisability of excision of the ankle has been suggested. The first is a patient aged 17, who states that about three years ago while going down stairs her foot was caught in her skirt, the ankle turned, and in falling she sustained a sprain. Since then she has suffered with severe pain in the ankle-joint. During the past six or seven months this pain has been of an aching character, and has been especially noticed at night during the early hours of sleep, the pain subsiding only on loss of consciousness. Every step on the foot has produced pain, and consequently she has endeavored to avoid using the foot as far as was possible. She has thus for a long time been resting the flexor and extensor muscles of this leg to avoid ankle motion, and as a result

\* A clinical lecture delivered at the Jefferson Medical College Hospital.

† Clinical Professor of Orthopedic Surgery in the Jefferson Medical College; Professor of General and Orthopedic Surgery in the Philadelphia Polyclinic and College for Graduates in Medicine; Clinical Professor of Orthopedic Surgery in the Woman's Medical College.



the muscles of the leg have shrunk considerably. On her admission to the hospital, on the thirtieth of January, her temperature was  $100.6^{\circ}$  F.; it continued at this point for three days, and then fell to normal, and has remained practically there ever since. You will notice the swollen character of the tarsus. There is a considerable amount of tumefaction, on the inner side of the foot especially, and the cutaneous veins are engorged. The foot is held in a flexed position, the normal position of rest. The patient has assumed this position because it was the one in which there was the least strain upon the joint. On palpating the foot I am unable to find any point of fluctuation. There was and is a slight œdema, but no fluctuation. On making gentle passive motion I find no abrasion of the joint surfaces. On strongly flexing the foot, pain is produced. This means that there are diseased bones here which are giving rise to pain when compressed by forced extension. The right calf is naturally larger than the left, you must remember, but here there is a shrinkage of two inches as compared with the opposite one. This indicates that during the period of three years the patient has used every effort to immobilize the joint. She walked with a stiff joint to prevent pain.

I will ask you to recall the statement I made when speaking of ostitis of the hip-joint. I said then that primary tubercular ostitis may produce a tubercular synovitis of the hip-joint. The same condition holds good here. There is here a form of ostitis, and strict

immobilization must be resorted to to prevent further destructive inflammation.

In cases like this, without suppuration, the question arises, shall we resort to conservatism or to operative procedures? There is a set of enlarged bones here, but no suppuration. It has been shown that in these cases of ostitis without suppuration the immobilization of the joint, or the conservative plan of treatment, when resorted to rationally, is followed by a restoration of the functions of the joint.

The method of removing diseased bone in these cases has been, *first*, to gouge out the necrosed bony tissue; this, however, has given unfortunate results, because a nidus of the disease is apt to be left, increased infection takes place, and further operative procedures are required, and occasionally amputation must be performed. If one bone only is affected, it should be removed in its entirety; if others are affected, remove them also, but do not remove a portion only of an affected bone.

This case will illustrate how the disease will last for years without the occurrence of suppuration. It is now in a state of acute exacerbation bordering upon suppuration, due to traumatism of motion induced by the use for four days of an inappropriate apparatus. This apparatus was prescribed and made by an instrument-maker to overcome the deformity that is present, and its free use was urged because proper use of the ankle would be beneficial. Nothing else could be expected, for it is not

to be supposed that the one who in this case prescribed the brace to encourage ankle-joint motion should know that the inevitable result of his want of knowledge would be to make the condition of the patient worse. He, of course, did not know that the case he was treating was tubercular osteitis of the tarsus, and that its tendency was towards increased destruction, and that every motion favored the development of the disease. Ignorance, however, can never be an excuse; but fortunately the patient's condition induced her to seek professional attention before actual suppuration had taken place.

The plan of treatment to be adopted is that indicated by the patient as necessary. She has instinctively restrained all motion, as evidenced by the flabby muscles; and we will continue the immobilization as long as any appearance of inflammation is present. I know of no more effective manner of securing the desired end than by the use of plaster-of-paris covering on the foot and leg, leaving the toes uncovered to permit of watching the circulation. Great stress must be laid on the position in which the foot is held. In this case, if I feared ankylosis I should place the foot in the position of a right-angle; but as I desire here to avoid traumatism of pressure, I shall put the foot in the position of rest—that is, slightly flexed. In removing such a plaster-of-paris dressing, it is often thought to be easier to cut down the outside of the limb; but where the foot is also encased, the removal and re-application of the cast is



difficult to accomplish. I therefore cut down the anterior surface directly over and in a line with the crest of the tibia, and there is enough elasticity to enable us to open the cast sufficiently wide to permit the easy removal of the foot and leg. In re-applying the cast, the greatest care must be observed in avoiding undue pressure, and then the apparatus is properly secured by means of an ordinary surgical bandage.

It is of great service in the incipient cases to elevate the foot. This patient has been kept rigidly upon her back for a week or ten days, with the affected foot elevated upon pillows. We will continue the immobilization for another week, and then allow her to get around on crutches.

The prognosis in this case is favorable, in that the osteitis has been kept under control and has not produced synovitis or suppuration. The prospects are that the joint motions will not be seriously interfered with, and that she will have a good ankle. The atrophy from disuse of the flexor and extensor muscles will receive due attention when an entire cessation of inflammatory action has occurred, and until that time crutches will be used to avoid the use of the foot.

*Chronic Tubercular Ostitis of Tarsus.*—The next case is very similar, and yet presents points of difference. The patient is 13 years old, and for a year has had a marked limping, with pain. There is a condition of ankylosis, an inflammatory condition of the ankle-joint. The patient was sent to me for the purpose of having

these adhesions broken up. You will observe here the identical condition of swelling of the tarsus which we saw in the other patient. We have a tumefaction of the ankle, with large subcutaneous veins; the foot, however, in a different position; and a diminution of two inches in the size of the calf as compared to the other. The temperature has been about normal. Motion is very slight; I can produce extension by exerting great force, but there is no flexion, and rotation at the ankle-joint is impossible. The position of the foot is that of a right-angle. There has been here an absorption of the inflammatory product, and these adhesions have been left. If you view the foot from the front, you will see that there is some eversion or valgus. The case is similar to the first in its general features, but the difference lies in the severity of the condition.

The ankylosis here is just the kind of ankylosis that would tempt us to resort to passive movements to give us a good joint. If we did so, what would be the result? Nature craves rest here, as the only condition which is conducive to the good of the patient. If we instituted passive motion, we would have increased inflammatory action resulting, with further breaking down of the tissues, and more suppuration. Before attempting to break up adhesions, be sure that the adhesions are the result of an acute and not of a chronic or tubercular nature. Immobilization, again, is required in such a case as this because the tendency is to suppuration.

These two cases are of great interest in another

direction, and that is in the character of deformity-producing deformities. There is an atrophy of the calf in both instances, arising from disuse. These cases which go on for a considerable length of time have the atrophy go on also, and this manifests itself not only in the calibre of the leg, but ultimately in the calibre of the bone, and also in a diminution in the length of the bone.

The cast in this case has been removed in a correct manner, the incision being down the front. The edges have then been bound with plaster strips to prevent their breaking.

*Rheumatoidal Arthritis of Tarsus.*—We have still a third case, one in which there has been some confusion in diagnosis. The condition is similar to the previous two cases in that there is an inflamed ankle-joint with similar symptoms and appearances, but some differences which make it interesting to bring in here. The temperature is about normal. The boy came to the hospital yesterday, because he was lame, to see if he could be cured. The condition is said to have increased rapidly during the last year and a half, from want of attention. The foot in this patient is in the right-angled position. There is a swelling on the inner surface of the tarsus, as in the other two cases, and there is no fluctuation on palpation. In the other two cases the ankle-joint was the only part affected. Here I find I cannot straighten the knee of the right side. The knee-joint on that side is swollen, the patella buried, and there is exquisite sensibility on the slightest touch. The hamstring tendons

are only moderately contracted. The semimembranosis and semitendinosis are brought into prominence on attempting to straighten the leg, showing that there is an acute inflammatory action here. The patient tells me that originally the trouble was in the shoulder-joint, and that then it involved the elbow of one side, and then the elbow of the other side. This is a case of chronic rheumatism, now undergoing acute exacerbation of left ankle and right knee, differing in its aspects from the other two cases, but yet with similar symptoms as regards the ankle. If we had only this ankle-joint involved, we might have had considerable difficulty in arriving at a diagnosis. Here the bones are not affected, but we have a rheumatoid inflammation of the articulating surfaces only.

The plan of treatment will be the same as in the others, externally. It would be incorrect to endeavor to restore the action of the joint by means of passive movements, for that would in the first place be unendurable, and secondly would keep up instead of allaying the inflammation. We will, in addition, administer internally antirheumatic remedies.

The fact that the other joints have been restored to partial usefulness gives me every reason to believe that the patient will go on to complete recovery. As long as the inflammatory condition is present we must limit the motion of the joint, to prevent destruction of the joint by calcification of the tissues and deposit of ossific material around the joint. This will probably be the case if the trouble goes on with any increased severity, but I believe



the disease will be arrested and that he will go on to recovery.

#### PSOAS ABSCESS RESEMBLING INCIPIENT HIP DISEASE.

At our last clinic I brought before you a case for diagnosis which seemed to indicate hip-joint disease, but you remember it was found that the hip was free from any lesion. In connection with that patient I bring this case before you for diagnosis, which was also brought here as a case of hip-joint disease. These cases of diagnosis of incipient lesions are of great importance, for they are too often allowed to go unrecognized. It is easier to wait for the development of the disease than to make a diagnosis early; but when you see the case, you will wonder how one could fail to make a diagnosis. Without entering into the history of the case, I shall simply present the patient as a question of diagnosis from hip-joint disease.

In my former remarks I told you that hip disease was a disease especially prone to show itself in children between the ages of four and ten years. While the disease occurs in adults, it is far more rare and the results are far more severe.

As you see, iodine has been applied all around this hip-joint for the purpose of allaying the pain from which the patient suffered—and this was the first thing I noticed when she was brought here a few moments ago. Notice the position which this leg assumes; it turns inward, and there is no muscular rigidity. I can make rotation with

the greatest ease. There is no restriction to the motion except when I rotate outwardly, and then the restraint is very slight. With the leg in a straight position I can with the greatest of difficulty evert the foot, but I can easily invert it. There is absence of rigidity in the flexors, extensors, and rotators. As I adduct I encounter no restraint, but on attempting to abduct the limb I can only move it out to a straight position. The psoas muscle which is attached to the lesser trochanter will restrict motion in the direction in which the resistance exists in this case. There is no shortening here. We know that psoas abscess will produce this psoas contraction. By gentle and yet forcible compression I can overcome this contraction, but, on relaxing the force, there is at once a return to the former condition. On uncovering the spine, I find on the sacrum a point of redness, and on gentle palpation I can discover here an accumulation of pus. There is a sinus at the last lumbar vertebra, giving discharge to a small amount of pus. During the past two or three months, the patient says, small pieces of bone have been discharged here. We are relieved, then, as to our fears of the presence of hip-joint disease.

By means of a probe let us ascertain if we can strike diseased bone here. The probe takes a direction towards the bodies of the vertebræ, and after entering two inches I find myself in contact with dead bone. It feels as though I were rubbing the probe on sandpaper. I feel it passing through the broken-down body of the

vertebra towards its anterior surface. I have endeavored with the greatest of care to find the point of connection between the sinus and the pus below, but have not been able as yet. Observe the depth to which I have passed the probe—about three inches—in order to strike the bone.

What shall be done with such a case? The present condition is excellent for any operative procedure. The only trouble is pain at the hip-joint, due to reflex contraction of the psoas muscle. Suppose I cut down the sinus to the point of dead bone, and attempt to remove it? The history of the case indicates the presence of a large amount of carious bone. To remove a small amount of bone would not benefit the case. To resort to the conservative treatment would task the patient's willingness to stay here. I shall open the abscess and explore, and remove as far as possible the dead bone which is accessible. I cannot take away the dead vertebrae, because I would be removing all of the support. Therefore a combination of conservatism with the progressive method shall be resorted to.

